

Corporeal Architecture: Measuring how it *feels* to perform as an Architecture Element

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Abstract

This abstract describes a seminar on „Corporeal Architecture“ intended to make students of Architecture aware that understanding the dynamics of human movement and how such movement is altered and shaped by different spaces and objects affects directly the human mind. The classes explored the relationship between body and space through an embodied approach to the design process that was translated into the construction of objects. The seminar was concluded with a scientific experiment, on the context of the author of this paper's doctoral thesis. The aforementioned Experiment, named Experiment #3 – Corporeal Architecture, measured the emotional experience of body extensions, body restrictions, and the body performing as an architectural element. The results of the experiment were evaluated by analysing changes in the sensorial perception of the user, while performing with objects. The experimental results support the main research hypothesis of the author's thesis: H1 - a user's emotional response to design objects as “compelled or not compelled”, “positive or negative”, “aroused or not aroused” and “dominant or dominated” can be evaluated through objective measurements of emotion. Results also show that the majority of subjects found the performance with the objects sensually very engaging, was very involved by visual aspects and involved by the haptic and auditory aspects. This suggests that although the subjects were focused on the most important aspect of the experiment which had to do with the movement of the body while performing with the objects, the kinaesthetic sense, they were also involved by the sense of vision and hearing. This suggests a high-level of engagement which makes the experience of the objects totally immersive. Results also show that most subjects were involved in the experiment and lost track of time during the performance. This suggests that the feeling of presence and arousal situations can be consciously induced in real-space although further research is necessary to understand which specific design elements are responsible for this. The majority of subjects also was compelled by the objects to perform and described the emotional response to them as “positive”. The majority of subjects rated the experiment as a very good learning experience and found that performance art techniques enhanced their creativity and capacity to design. Therefore, results also verify Hypothesis H3, which suggests that somatic techniques of “performance art” and “emotional design” are an effective strategy to develop corporeal awareness and stimulate the creativity of students and designers. Results confirm that it was useful to include biometric technology in this experiment, to determine with real-time data how the emotions of a user are triggered while experiencing design objects. This is done mainly through the analysis of skin conductance changes and cardiac accelerations, which are strongly correlated with emotional arousal, according to emotion measurement methodologies. Our aim in the experiment was to observe peak and limit reactions that provided for a wide scale of physiological measures. Nevertheless further work is necessary to establish solid conclusions. In future experiments, it is proposed to maintain the use of electroencephalogram (EEG) and add to the experimental setting eye-tracking sensing technology to record the position of the user and where s/he is looking at.

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